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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/827,142

04/19/2004

Trudy L. Benjamin

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EXAMINER

MARTIN, LAURA E

ART UNIT

PAPER NUMBER

2853

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/827,142	Applicant(s) BENJAMIN, TRUDY L.	
	Examiner Laura E. Martin	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-63 is/are pending in the application.
- 4a) Of the above claim(s) 1-22 and 35-57 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-34 and 58-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Election/Restrictions***

Applicant's election with traverse to Species VIII in the reply filed 10/25/06 is acknowledged. The applicant argues that claims 1-34 are generic to species VIII; however, the examiner disagrees. Claims 1-8 require a control line and control signals but do not teach timing pulses and claims 9-22 require control signals (which can be a plurality of different types of signals), but do not require timing pulses or bank circuitry. The examiner agrees that claims 23-34 are generic to Species VIII.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23-25, 27, and 29-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Bloomberg (US 20020097287).

Bloomberg discloses the following claim limitations:

As per claim 23: firing cells including a first group of ejection elements and a second group of ejection elements (figure 4, element 46); an address generator including first bank circuitry (figure 4, element 46) configured to receive a group of timing pulses from a series of timing pulses (figure 4, element 74) and

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generate a first sequence of address signals [0038], wherein the first sequence of address signals is adapted to enable the first group of fluid ejection elements (figure 4, element 64); and second bank circuitry (figure 4, element 68) configured to receive a second group of timing pulses from a series of timing pulses (figure 5b, figure 4, element 74, and [0037]) and generate a second sequence of address signals in response to the second group of timing pulses [0038], wherein the second sequence of address signals is adapted to enable the second group of fluid ejection elements.

As per claim 24: a first shift register (figure 6, element 90) configured to provide first output signals.

As per claim 25: a second shift register (figure 6, element 92) configured to provide second output signals.

As per claim 27: a direction circuit configured to receive a third group of timing pulses from the series of timing pulses and provide direction signals in response to the third group of timing pulses ([0037, figure 5B, figure 4, elements 74, 46, and 66).

As per claim 28: the first shift register and the second shift register receive the direction signals (figure 6, element 90 and 92) and shift in selected direction based on the direction signals.

As per claim 29: a first logic circuit configured to provide the first sequence of address signals in response to the first output signals (figure 6, element 106).

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As per claim 30: a first logic circuit configured to receive a first sequence of address signals in response to the first group of timing pulses (figure 6, element 106, figure 4).

As per claim 31: a direction circuit configured to receive a third group of timing pulses and provide direction signals in response to the third group of timing pulses ([0037, figure 5B, figure 4, elements 74, 46, and 66).

As per claim 32: the first bank circuitry and the second bank circuitry receive the direction signals and provide the first sequence of address signals and the second sequence of address signals in selected sequences based on the direction signals pulses ([0037-0038], figure 5B, figure 4, elements 74, 46, and 66).

As per claim 33: the first bank circuitry is a first bank generator and the second bank circuitry is a second bank generator (figures 4 and 6, elements 64 and 66 generate printing from inkjets 46).

As per claim 34: the address generator is electrically coupled to both the first group of fluid ejection elements and the second group of fluid ejection elements (figure 4, elements 62 and 46), wherein the first bank circuitry is coupled to the first group of fluid ejection elements and not the second group of fluid ejection elements, and wherein the second bank circuitry is coupled to the first group of fluid ejection elements and not the second group of fluid ejection elements (figures 4 and 6).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 26, 58-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bloomberg (US 20020097287) in view of Kanematsu et al. (US 20020113832).

Bloomberg discloses the following claim limitations:

As per claim 26: the first bank circuitry comprises a first logic circuit configured to provide the first sequences of address signals based on the first output signals (figure 6, element 106)

As per claim 58: firing cells (figure 4, element 46); an address generator (figure 4, element 62) electrically coupled to the first and second groups of firing cells (figure 4, element 46), the address generator including: first bank circuitry (figure 4, element 64) configured to receive a first group of timing pulses (figure 5b, figure 4, element 74, and [0037]) and generate a first sequence of address signals [0038] in response to the first group of timing pulses, the bank circuitry electrically connected to the first group of firing cells (figure 4, yellow ink jets) and not the second group of firing cells, wherein the first sequence of address signals is adapted to enable the firing cells; second bank circuitry configured to receive a second group of timing pulses (figure 5b, figure 4, element 74, and [0037]) and

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generate a second sequence of address signals [0038] in response to the first group of timing pulses, the bank circuitry electrically connected to the second group of firing cells (figure 4, cyan ink jets) and not the first group of firing cells, wherein the second sequence of address signals is adapted to enable the second group of address signals.

As per claim 59: a first shift resistor (figure 6, element 90) and a first logic circuit configured to provide a first sequence of address signals base on the first output signals (figure 6, element 106).

As per claim 60: a second shift register (figure 6, element 92) configured to provide a second output signal.

As per claim 61: a direction circuit configured to receive a third group of timing pulses from the series of timing pulses and provide direction signals in response to the third group of timing pulses ([0037], figure 5B, figure 4, elements 74, 46, and 66).

As per claim 62: the second shift register receives the direction signals and shift in a selected direction based on the direction signals (figure 6, element 90 and 92; [0023])

As per claim 63: the first bank circuitry is a first bank generator and the second bank circuitry is a second bank generator (figures 4 and 6, elements 64 and 66 generate printing from inkjets 46).

Bloomberg does not disclose the following claim limitations:

As per claim 58: firing cells including a first group of resistors and a second group of resistors within the firing cells.

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As per claim 60: a second logic circuit configured to provide the second sequence of address signals based on the second output signals.

As per claim 26: the second circuitry comprises a second logic circuit configured to provide the second sequence of address signals based on the second output signals.

Kanematsu et al. disclose the following claim limitations:

As per claim 58: firing cells including a first group of resistors and a second group of resistors within the firing cells (figure 5, elements 2-106 and [0163]).

As per claim 60: a second logic circuit configured to provide the second sequence of address signals based on the second output signals [0210].

As per claim 26: the second circuitry comprises a second logic circuit configured to provide the second sequence of address signals based on the second output signals [0210].

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ejection device taught by Bloomberg with the disclosure of Kanematsu et al. in order to provide independent printing for each printhead.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura E. Martin whose telephone number is (571) 272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Laura E. Martin

 1/8/07
MANISH S. SHAH
PRIMARY EXAMINER